

# Electronic Administration and COVID-19 Pandemic: Opportunities and Challenges for Nigerian University Administration

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## ABSTRACT

Coronavirus disease (COVID-19) has lay siege to all countries of the world and affected all facet of life of human beings. It led to the total/partial lockdown of various sectors of the economy of most countries of the world. Nigeria also closed down almost all sectors of its economy, Nigerian Universities inclusive. The Federal Ministry of Education has ordered Nigerian Universities to close down academic activities from March 20th, 2020 to January 18th, 2021. This paper seeks to explore various opportunities provided by electronic administration for Nigerian Universities to continue to operate and be relevant during and post-COVID-19 pandemic such opportunities include e-learning, e-meeting, e-circular, e-notification, virtual conference, e-examination, e-survey, database management among others. The paper also looks at the challenges that may hamper the utilization of these opportunities as epileptic power supply, lack of infrastructure, cost of data, inadequate finance, organizational culture, security and privacy, computer illiteracy, maintenance etc. The paper recommends renewable energy option for electricity, training and retraining of staff, more sophisticated security software among others. The paper uses secondary data to arrive at conclusion. This paper concludes that Electronic administration potentials if fully harnessed and utilized can help in the continuation of operation of Nigerian universities even during lockdown and closures.

**KEYWORDS:** *E-administration, COVID-19 pandemic, Nigerian Universities, ICT, Administration, and Education*

## INTRODUCTION

Coronavirus first emerged in Wuhan, a commercial city in China with over 11 million population. The clinical disease emanating from the virus is called Coronavirus Disease 2019 (COVID-19) (Kanu, 2020 and Kandola, 2020). As the name implies, the disease was discovered in December 2019, after which it continues to spread to other places in China and later spread to 210 countries and territories around the world. The World Health Organization (WHO) declared the COVID-19 as a public health emergency of international concern on January 30th, 2020 and called for collaborative efforts of the various countries of the world to prevent the rapid spread of the COVID-19. Also on March 11th, 2020, the WHO declared COVID-19 as a global pandemic that required international attention (Ochilbek and Senol, 2020). According to the National Center for Disease Control (NCDC), the very first case of COVID-19 infection in Nigeria was imported from Italy on

March 10th, 2020. The number of infection continues to increase on daily basis, affecting almost every nooks and crannies of Nigeria. It is transmitted via aerosols and fomite due to closeness with an infected person or touching an infected surface. It causes severe upper and lower respiratory infections. The symptoms are fever, dry cough, sore throat, sneeze, headache, diarrhea, fatigue, sudden loss of taste and smell. All these culminate to respiratory failure needing aggressive respiratory support and having the risk of death from the viral infection.

The fight against the COVID-19 pandemic is still going on across the world as the disease is continually spreading like a wildfire. Some of the WHO recommended preventive measures include frequent washing of hands with soap under running water for at least 20 seconds or in the absence of soap and running water, alcohol-based sanitizer can be used; wearing of medical or cloth face mask; quarantining

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of positive-related persons and their contacts; social/physical distancing by leaving at least 2 metres between one person and the other; limit social gatherings and time spent in crowded places; cough or sneeze in your bent elbow not in your palms; avoid touching your eyes, nose or mouth with unclean hands; avoid close contact with someone who is sick; and clean and disinfect frequently touched objects and surfaces. In line with these governments at different levels in Nigeria come up with numerous health, social and economic measures aimed at curtailing the rapid spread of the COVID-19. Some of the measures include total/partial lockdown, interstate travel ban, inter-local governments travel restrictions, ban on social/religious gatherings, night curfew and limiting number of persons at all confined spaces, isolation and quarantining of confirmed and suspected cases as well as contact tracing, sensitisation and awareness campaigns via media, flyers and text messages for people to take proactive measures against the deadly virus. These measures resulted in closing almost all sectors of the economy including schools, businesses, transportation, borders etc. Nigerian universities were closed on the order of the Ministry of Education on March 20th, 2020.

With the development of ICT more than 20 years back, administration of Nigerian Universities experienced a paradigm shift. There are one hundred and ninety seven (197) universities in Nigeria. By ownership there are ninety nine (99) private universities, fifty three (53) state universities and forty five (45) federal universities (National Universities Commission, 2021). These universities contain hundreds of thousands of students ranging from undergraduate to postgraduate in different fields of endeavors. These universities also contain thousands of staff including academic and non-academic staff. There are currently 2.1 million students studying in Nigerian Universities. The figure is little higher than what it was in 2017 (NUC, 2021). In 2017 Nigerian universities counted an estimate of 2 million undergraduate and postgraduate students were enrolled into the Nigerian universities. Among the postgraduate students, women accounted for 36 percent of the total while male accounted for 64 percent (NUC, 2017). By the year 2017, there were 61,999 total numbers of academic staff and 127,259 non-academic staff, out of these academic staff only 9,459 was professors (NUC, 2018).

The Provision of qualitative and quantitative education, character as well as training and retraining to aspiring Nigerian universities students which comprises of undergraduate and postgraduates is a major responsibility of the Nigerian universities. "The success or failure at this task is largely dependent on

their capacity to respond rapidly to the opportunities that exists for education delivery in today's fast charging and technologically-driven world" (Olusegun et al, 2006). With the introduction and advancement in Information and Communication Technology (ICT) such as computer and internet-related facilities, traditional administration where by correspondence are processed using paper and files and general administrative activities are carried out manually; traditional educational delivery which consists of lecturers having physical meetings with students in classrooms/halls/labouratories for lectures, examinations, seminar, project/thesis/dissertation defense, experiment etc. It is no news now that the advances in ICT as well as computer and internet-related facilities have culminated in the supplementation and near phase out of traditional administration and traditional education delivery with e-administration and e-learning respectively.

Nigerian universities, however, are said to be left behind in the adoption and embarrassment of e-administration. This is because Nigeria, apart being a developing nation and having inadequate education Finance policy, is also highly deficient in the area of engineering and technological development. These problems affected university education in Nigeria, posing difficulty in knowledge delivery, research and general university administration (Olusegun et al, 2006). Ifijeh et al, (2015) observed that very few Nigerian Universities operates e-learning platforms which provides opportunities for uploading and downloading of lectures note, giving and submitting of assignments as well as virtual classroom discussions. In the same vein, the methods of information management in Nigerian universities have been traditional which includes acquisition and dissemination of knowledge and information resources to members of the University community in furtherance of the attainment of the institutional objectives (Ifijeh and Yusuf, 2020). Again the culture of dispatching circulars, memo or correspondence from one office to the other manually as well as carrying out general administration in the traditional methods, however, these traditional methods employed by the Nigerian universities since the federal government of Nigeria ordered for the closure of all campuses on account of COVID-19 pandemic. Even if the campuses are reopened, there is need to control large crowds and physical distancing in the campuses of Nigerian universities. Due to the need to keep students engaged and for the continuation of academic activities, Nigerian universities started adopting online teaching and learning methodologies (Ifijeh and Yusuf, 2020). Some universities also started thinking of adopting hybrid teaching and

learning methodologies where by combination of both traditional and online methods will be used in post COVID-19 (Atayero, 2020). Consequently, Nigerian universities traditional method which requires physical contact between lecturers and students or between employees become highly impossible and highly restricted during the current Pandemic and may remain so post COVID-19. Nigerian Universities are being challenged to adjust to the new paradigm shift for them to continue to function and sustain relevance (Iwu-james et al, 2020).

### Statement of the Problem

In December 2019, there was an outbreak of COVID-19 pandemic in Wuhan, China, which later spread to all part of the world. It is an airborne disease that easily spread as a result of physical contact with an infected person. As a result, many nations enforced lockdown and shutdown all their boundaries in order to contain the spread of the virus. African countries and particularly Nigeria closed down its economy including universities. While Nigerian public university students and their teachers remain at home idle, their counterparts in private universities continue their studies with the help of ICT. This paper focus on the role e-administration could play in the emerging paradigm shift in the Nigerian public universities administration during the current and post COVID-19 pandemic.

### Research Questions

This study seeks to find answers to the following research questions.

1. What are the opportunities that e-administration can offer to Nigerian public universities during and post COVID-19 pandemic?
2. What are the challenges that can hinder the adoption of e-administration in Nigerian public universities during the COVID-19 pandemic?

### Methodology

This study is conceptual in nature and it employed secondary data like journals, textbooks, internet resource, government documents, and many others to analyze the role e-administration could play in the emerging paradigm shift in the Nigerian universities administration during the current and post COVID-19 pandemic.

### Theoretical Framework

This study is anchored on the Kurt Lewin's theory of change. Kurt Lewin (1951) is known as a pioneer in the study of group dynamics and organizational development. He theorized a three-stage model of change (unfreezing-change-refreezing model) in order to identify and examine the factors and forces that influence a situation. The theory requires administrators to reject prior knowledge and replace it

with new information (Sonia and Joan, 2018). The process of change entails creating perception that a change is necessary, then moving toward the new, desired level of behaviour and finally, solidifying that new behaviour as the norm (Sherri, 2021).

Unfreezing is the first stage, which involves the process of critically studying the employees behaviour, organisational behavior and climate, process, clients and organisational structures with a view to identify areas of weakness which will be used to justify the need for change in that organisation . In this stage, there is bound to be conflict as not all individuals like or accept change instantly. Sherri (2021) opined that the goal at this stage is to create awareness of how the status quo is hindering the organisation in some way and employee become informed about the imminent change, the logic behind it and how it will benefit the employees.

The second stage is change, Lewin recognized that change is a process where the organization transit or move into a new state of being (Sherri, 2021). In addition, Sonia and Joan (2018) opined that this stage involves the process of a change in thoughts, feelings, and/or behaviours. Lewin (1951) describes three actions that can assist in movement: (1) persuading others that the status quo is not beneficial and encouraging others to view a problem with a fresh perspective; (2) working with others to find new, relevant information that can help effect the desired change; and (3) connecting with powerful leaders who also support the change (Kristonis, 2005 cited in Sonia and Joan, 2018). This second stage is where the implementation of the program or policy in order to achieve the desired change.

Lastly, stage three, which Lewin called freezing but many refer to it as refreezing to symbolize the act of reinforcing, stabilizing, and solidifying new state after the change (Sherri, 2021).it involves establishing the change as a new habit (Sonia and Joan, 2018). The changes made to the organizational processes, goals, structure etc are refrozen as the new norm or status quo and efforts are must be made to guarantee the change is not lost (Sherri, 2021).

Going by this model of change, the Nigerian Public University Administrators can adopt it to change from the traditional administration to modern administration (electronic administration).

### Concept of E-administration

E-administration is a paradigm shift from the traditional approaches to public administration which means utilization of human and material resources as well as rendering services for the attainment of individual and organizational goals through the use of



computer and internet-related facilities. According to Samuel et al (2015 p18) "Electronic administration entails mechanisms which converts traditional administration processes into electronic processes with the goal of creating paperless office, introducing total transparency and accountability, reducing costs and improving productivity and performance leading to better governance".

The notion of electronic administration was conceived in 1980s with the advancement ICT and the implications it portends in enhancing the capacity of the agencies involved in the provision of social services on behalf of the government. The attention of scholars and researchers in the field of public administration was captured in the trends of ICT and realized that efficiency and effectiveness may be enhanced in public administration with the utilization of ICT. It is in recognition of the merit of ICT in public administration nomenclature "e-administration" (Samuel et al, 2015). The term e-administration is sometimes called "digital administration", "e-governance", "electronic mediated Administration", "internet-based governance", "online governance", cyber administration" or "virtual administration".

Many scholars have defined e-administration in different ways. Ogbonna (2011) view e-administration as the delivery of management information and decisions through the internet or other digital platforms for smooth running of organizational affairs. Cheri and Muhammad (2018) defined e-administration as the process of reform in the way management work, share information, engage people and deliver services to the external and internal clients for the benefit of both managers and the clients they served using computer and internet-related facilities. In the same vein, Singh and Abbas (2015 p20) defined e-administration as "the application of ICT (Information and Communication Technology) to provide government services to the citizens through internet". Also, Kehinde et al (2017 p175) sees e-administration as "being a more collaborative style of administration, featuring, and more collaboration with external sectors in making policy and in delivering services, more collaboration with the University stakeholders within the workplace". Therefore, e-administration can be seen as a platform that encourages participative management and decision making avenue where by various stakeholders interact to pursue a common goal.

### **Aims and Objectives of E-Administration**

The general objective of e-administration is to facilitate smooth running of administration of an

institution. According to Cheri and Muhammad (2018), the strategic objective of e-administration is to support and simplify administration for managers/administrators, people and businesses. E-administration can connect all stakeholders and support processes and actions. Tony (2002) opined that the objective of e-administration is to provide better services through more convenient, faster access to information and services; reduce costs for individual and businesses by reducing search time, time in filling out forms and faster decisions; and reducing costs of governance by reducing data entry costs and lower error rates. These would bring about revolution in the quality of services rendered by the public institutions on behalf of the government. E-administration provides opportunities for transparency in the administrative process; saving of time due to provision of services through internet which is faster and better; simplification of process and procedures; better office and record management; reduction in corruption; and improve attitude, behavior and job handling of the employees (Monga, 2008).

According to Ojo cited in Richard and Eme (2015 p22), some of the objectives of e-administration include the following:

- To ensure transparency in the workings of government;
- To ensure greater efficiency, objectivity, accountability and speed in providing services and information to the public;
- To provide qualitative and cost-effective services;
- To provide a single window for all government services;
- To evolve responsive administration; To provide a friendly, speedier and efficient interface; and
- To eliminate the middlemen.

According to the Report on the Review of ICT in Government prepared by Service

Delivery and Performance Commission in 2006, government's investment in technology provides significant benefits to government, industry and the community at large, including:

- to increased accessibility, inclusivity and flexibility in government service delivery the ability for more of the community to interact with government, with the flexibility of choice offered by multiple delivery channels and at more convenient times;
- to improved value for money, it enables quality services to be provided through lower cost delivery options, it also improved productivity both of public servants and the economy; and

- to stimulate the ICT industry through identification of opportunities for innovation and partnering with the private sector to improve government service delivery (Kehinde et al, 2016).

### Models of E-Administration

The National Universities Commission of Nigeria has over the years argued that for Universities to achieve their mandates they need effective and efficient management of its resources and an open access to data and information needs of the community (Ogbonna et al, 2011). On this note and the rising trend of e-administration on enhancing administrative efficiency, the NUC developed two e-administration and e-management models.

E-administration and e-management has been given much attention in recent policy debates of NUC, in particular in the context of the so-called **Intel-Institutions** with the twin introduction of Universities Program Accreditation Portal (**UPAP**) and Nigerian University System Management Portal (**NUSMAP**).

Its aim is to develop an e-management model, that would specify the benefits and the objectives for the user's community, as to;

- address the challenges of delivery and success of the model;
  - highlights the special futuristic concerns of Universities; and
  - map out policies that guide implementations.
- The final goal for this e-model would be to;
- foster a better University management and standards;
  - offer better e-services;
  - enhance internal database creation; and
  - improve decisions and policy-making from a participatory perspective (Ogbonna et al, 2011).

### Goals of Nigerian Universities

The National Policy on Education (FGN, 2014) section 5 subsection 80 - 82 outlined the goals of Nigerian Universities as follows:

- contribute to national development through high level manpower training;
- provide accessible and affordable quality learning opportunities in formal and informal education in response to the needs and interest of all Nigerians;
- provide high quality career counseling and lifelong learning programmes that prepare students with knowledge and skills for self-reliance and the world of work;
- reduce skill shortages through the production of skilled manpower relevant to the needs of the labour market;
- promote and encourage scholarship, entrepreneurship and community service;

- forge and cement national unity; and
- promote national and international understanding and interaction.

Nigerian Universities pursue these goals through:

- quality student intake;
- quality teaching and learning;
- research and development;
- high standard in the quality of facilities, services and resources;
- staff welfare and development programmes;
- provision of a more practical based curriculum relevant to the needs of the labour market;
- generation and dissemination of knowledge, skills and competencies that contribute to national and local economic goals which enable students to succeed in a knowledge-based economy;
- a variety of flexible learning modes including full-time, part-time, block release, and sandwich programmes;
- access to training funds such as those provided by the Industrial Training Fund (ITF) and the Tertiary Education Trust Fund (TETFund);
- Students Industrial Work Experience Scheme (SIWES) that is well structured, coordinated and supervised;
- maintenance of minimum educational standards through appropriate regulatory agencies;
- an all-inclusive, credible admissions policy for national unity;
- supporting affordable, equitable access to tertiary education through scholarships and students loans;
- inter-institutional cooperation and linkages; and
- dedicated services to the community through extra-mural and extension services (FGN, 2014).

### Global competitiveness of Nigerian Universities

It is indubitable that Nigerian universities produced global award winners in the sciences and humanities, international civil servants, respected researchers, academicians, successful businessmen and women with international recognition (Cheri and Muhammad, 2018). Despite this, Nigerian universities are characterised by dilapidated infrastructures, understaffing, unequipped libraries and laboratories. Therefore, they tend to produce under skilled graduates that cannot compete with their colleagues in similar field of endeavor who graduated from other universities around the world. Cheri and Muhammad (2018) observed that some universities produced graduates that lack requisite employability skills and cannot cope with modern challenges.

In the recent Times Higher Education 2021 world universities rankings of more than 1500 universities across 93 countries and regions, making them the

largest and most diverse university ranking to date only six Nigerian universities featured, university of Ibadan (401th-500th), Lagos State University (501th-600th), University of Lagos (601th-800th), Covenant University (801th-1000th), University of Nigeria, Nsukka (1001+) and Obafemi Awolowo University (1001+). The Universities were assessed based on their performance in teaching, research, knowledge transfer and international outlook. This implies that no Nigerian university is featured in the first 400 universities in the world, yet there are universities from China, Japan, Taiwan, Malaysia, Iran, Qatar, Saudi Arabia, India, South Korea and South Africa among other developing countries that featured among the Top 400 universities. South Africa and Egypt were topping the African continent (Times Higher Education, 2021).

Furthermore, the QS world university rankings revealed the top 1000 universities from around the world, covering 80 different locations. The universities were evaluated based on academic reputation, employer reputation, faculty/students ratio, citations per faculty, international faculty ratio and international student ratio. Therefore, none of the Nigerian universities featured while countries like China, Hongkong, Japan, South Korea, Malaysia and Taiwan featured among the Top 100 universities while South Africa and Egypt topped the African continent (QS Top Universities, 2021).

### Effects of COVID-19 on Nigerian University Administration

As noted earlier, the Federal Government of Nigeria, in its efforts to contain the spread of COVID-19 ordered the closure of all schools in Nigeria. Similarly, on March 23rd, 2020, the National Universities Commission (NUC) ordered all universities in Nigeria to close down. Though schools were allowed to reopen on October 12th, 2020, as the first wave of COVID-19 eases, but universities in Nigeria were not reopened due to industrial action by the Academic Staff Union of Universities (ASUU). Again, on December 21st, 2020 the Federal Government of Nigeria through the Presidential Task Force (PTF) on COVID-19 ordered the second closure of all schools till January 18th, 2021 as the surge of the second wave of COVID-19 pandemic surpassed. These closures affected Nigerian Universities in the following ways:

1. Finance: Most Nigerian universities internally generated revenue is centred on students' school fees, levies and dues, sundries and other charges, hostels and accommodation, rent on university properties, transport fares etc. These sources were affected due to universities closures. The

implication of this is that the internal budget arrangement in relation to sourcing of funds and expenditure for smooth running of the universities were affected. Hence Nigerian universities may likely face financial crisis post COVID-19 pandemic. Also, it is a well-known fact that Nigerian universities internal budget is for one year, by due to the closures, the budget may need to be elongated to exceed one year because of inadequate funds unless a university may resort to borrowing.

2. Manpower: Since the outbreak of COVID-19 and its importation into Nigeria, it has led to the death of many researchers, experts and professionals in different fields of endeavour. COVID-19 pandemic has also affected manpower planning and development of most Nigerian universities in the sense that bunch of universities workers are undergoing training and courses at different levels of educational institutions. The closures of schools may delay the completion of the studies. Ogunode et al (2020) observed that Nigerian universities have lost many lecturers and great researchers to COVID-19 pandemic and this loses may hamper growth and development of these institutions of learning.
3. Reduction in Budget Size on the other hand, the Federal Government of Nigeria prepared the 2020 budget with revenue expectation at #84.24 Trillion, oil price benchmark at \$57 per barrel and oil output at 2.18 million barrels per day. With the outbreak of COVID-19 pandemic and its implications on the Nigerian economy, the oil price was now below \$30 per barrel. This compelled the Federal Government to down size the education budget by #50.76 billion (Ogunode et al, 2020).
4. Teaching and Learning Gap: COVID-19 pandemic has posed greater challenges and difficulties to teaching and learning due to schools closures. Many learners could not access knowledge as a result a wide gap is created that may take a long time to bridge. According to Adelakun (2020), "as at April 21st, 2020 approximately 1.723 billion learners have been affected with the sudden closures of schools in response to COVID-19 pandemic". Though the effect may short or long as some learners may be permanently drop out. As some private universities were running virtual or online classes, public universities were not during the closures.
5. Disruption of Academic Calendar and Activities: Each university into Nigeria has it own plans and programme of events with date and time arranged



sequentially as one event precedes the other throughout an academic session; the plans of most Nigerian universities have been affected. Though some universities that operates e-learning, their academic calendar and activities were partially affected unlike those that do not. Adelakun (2020) & Ogunode et al (2020) observed that the implication of this is that it would affect the students' academic career, plans and programmes as it would make them to stay longer than expected to complete their studies.

6. Cancellation/Suspension of local and international conferences: Conference is a formalized event where researchers, scholars and academicians present their research papers and findings for deliberations and consensus in order to expand the frontiers of knowledge in a particular field of endeavor. Ogunode et al (2020) observed that many conferences on different programmes that are planned for the year 2020 have been cancelled or suspended due to COVID-19 pandemic and this may affect the discovery and new findings in different fields of endeavors.
7. Suspension of Assessments/Examinations: Many universities in Nigeria were in the period or assessments. Some universities have either started their first semester Continuous Assessment (CA) or have already started their examinations. For instance, University of Maiduguri was at the verge of completing their examinations. The suspension of the continuous Assessment or the examinations is necessary as the government closed down universities in order to contain the spread of COVID-19 (Ogunode et al, 2020). The suspension has also affected students of both undergraduate and postgraduate levels. Some students of postgraduate levels were at the verge of defending their thesis or dissertation at external level but were suspended. Also, some postgraduate students were at different levels of assessments in their coursework but were suspended.
8. Small and Medium Businesses within the university community: It is indubitable that closure of schools due to COVID-19 pandemic has affected many people including the university community. Some small and medium enterprises operating within the university campuses were forced to shut down for lack of patronage as students were sent home due to COVID-19. This posed untold hardship on the university community because items like food stuffs and provisions that used to be available on campuses now were not. Universities rented shops or land to

this business owners and pay rent to the universities. Therefore, this rent is no longer feasible due to closures of these universities.

9. Internationalisation of Nigerian Universities: Nigerian universities are yearning for international recognition and outlook. The ability of a university to attract undergraduate and postgraduate students as well as international scholars, researchers and academicians from all over the planet is key to its success in the world stage. In the 2021 world university ranking of over 1500 universities across 93 countries and regions, only six Nigerian universities featured which are University of Ibadan, Lagos State University, University of Lagos, Covenant University, University of Nigeria, Nsukka and Obafemi Awolowo University (Times Higher Education, 2021). Closure of schools due to COVID-19 has forced many international students, scholars, researchers and academicians to go back to their countries and some might not return to continue with their studies due to travel ban. Ogunode et al (2020 p130) observed that "in a survey of more than 2000 students from Africa, Asia and Australia, conducted by QS, nearly 3 in 10 said their plans had changed due to the virus".
10. Research and Development: One of the primary goals Nigerian universities is research and development. According to the National Policy on Education (FGN, 2014 p42) "university research shall be relevant to the nation's developmental goals. Particular attention shall be paid to research and promotion of indigenous knowledge in Nigeria. In this regard, universities shall be encouraged to collaborate with government, industries and the global community in the conduct of research and disseminate the results". Now that the universities are closed, various research that would provide solution to certain societal/national or international problems; expand the frontiers of knowledge, new discoveries as well as national development are either cancelled or suspended.

### **ICT and University Administration: The Nexus**

The transformation of university administration was made possible by use of ICT in running the affairs of the institutions for optimal performance. The process would be more comprehensive with involvement of institutional reforms and technological improvements. Use of ICT can considerably change the way in which services are rendered to the university community overcoming the logistical and temporal barriers and obstacles. ICT empowers the staff and the students to be actively involved in policy making and decision

making processes and help to ensure responsiveness and transparency in the use of university resources and responding to issues (Kehinde et al, 2017).

According to Ben-Zion et. al. (1995) cited in Khrishnaveni & Meenakumari (2010), ICT can be used extensively for university administration. The following are some of the areas where ICT can be applied for effective university administration:

- General Administration
- Pay Roll and Financial Management
- Administration of Student Information
- Inventory Management
- Personnel Management
- Library and Information System

Khrishnaveni & Meenakumari (2010) further noted that ICT would be applied to enhance the day-to-day management of universities and the various operational areas in which it could be applied are specified below:

- Timetabling
- Student admission and Tracking

- Financial Management
- Medical services
- Procurement and Store management
- Data distribution and management

On this note, ICT is a resource for renovating university community that allows for rapid transformation towards quality change, and improving services to the staff and students. It is a crucial instrument for re-engineering administrative proceedings and for introducing new organizational progress (Kehinde et al, 2017).

Information Administration is one part of overall university administration which mainly covers general and day-to-day operational activities of the universities. Thus, Hence, Information administration has three major components namely, Student administration, Staff administration, and General administration. These components can further be presented on a theoretical model for Information administration below:



**Figure 1: Theoretical model for Information administration**

Source: Khrishnaveni & Meenakumari (2010)

Staff Administration starts from recruitment exercise to appraisal, electronic assessment is the ideal thing, makes it more transparent, result oriented and faster. Laxity and truancy, is also checkmated electronically using Biometric Verification Machine (BVM). Installation of CCTV to check and control crime in the university is a key to reduce violent and conflicts. In managing personnel electronically, database can be used to keep staff information system. These records are then used to calculate the workers output and performance indicators such as labour turnover, absenteeism, quality defects and lateness to work. Programmes such as software will enable the management to identify, trend and act accordingly (Kehinde et al, 2017). Ghost workers can also be checked through e-payment and Biometric Data Capture as well as regular verification of staff.

**Student Administration:** Student administration starts from admission to graduation. Krishnaveni and Meenakumari (2010) observed that the important items identified under this category relates to the automation of admission process through e-media. This includes admission enquiry by students, admissions application through electronic media, registration / enrolment using ICT, course allotment, and availability of information like timetable / class schedule in electronic form and attendance monitoring / maintenance through e-media. Further it includes the various communications relating to transport, hostel accommodation and other communication to guardians/parents. The integration also helps in expansion of the geographical boundaries for student intake.

**General Administration:** Computer and internet-related facilities are resources for renovating university community that allows drastic transformations toward quality change, and in improving services to the staff and students. It is a crucial instrument for re-engineering administrative proceedings and for introducing new organizational progress. The gains in efficiency and effectiveness are focused on different fields of reforming and simplifying administrative procedures starting from modernizing recruitment procedures, improving decision making, combating corruption, enabling trade of information, reducing the costs, enhancing the coherence, increasing the control, consolidating basic principles of good governance etc (Kehinde et al, 2017). ICT can help in managing the (4ms) of management i.e. men, money, machine and materials.



ICT changes the policy making process in our Institutions. ICT makes policy decisions user-adaptable and easy to comprehend. ICT framework increases the revenue base of the Universities through the use of the enterprise portals. ICT leads the administration better access to public opinion ICT provides the user community greater access to information on programs and policies of the administration (Ogbonna et al, 2011). The important items identified under this category relates planning, directing, staffing, coordinating, organizing, budgeting, policy and decision making using computer and internet-related facilities.

### Items Categories Generated for Information Administration

S/NO	CONSTRUCT	CONTENT CATEGORIES
1	Students Administration	<ul style="list-style-type: none"> <li>• Usage of electronic media by students to apply for admissions</li> <li>• Usage of computers for student registration / enrolment</li> <li>• Availability of timetable / class schedule in electronic form</li> <li>• Usage of computers for maintenance of attendance of students</li> <li>• Communication of academic details of students to their parents / guardians through e-media</li> <li>• Usage of e-media for notifications regarding hostel accommodation</li> <li>• Usage of e-media for notifications regarding transportation</li> </ul>
2	Staff Administration	<ul style="list-style-type: none"> <li>• Usage of computers for recruitment and work allotment of staff in the institution</li> <li>• Automation of attendance and leave management of staff members in the institution</li> <li>• Usage of electronic media for performance appraisal</li> <li>• Communication with staff using e-media</li> <li>• e-circulars from the institution regarding official matters</li> <li>• e-kiosks are available in the institution</li> </ul>
3	General Administration	<ul style="list-style-type: none"> <li>• Usage of e-media for scheduling / allocation of halls for examinations</li> <li>• Dissemination of information in the institution through e-kiosks</li> <li>• Usage of e-media by students to apply for university examinations</li> <li>• Usage of e-media for the processing and display of results of students</li> <li>• Facility for students to make fee payments electronically</li> </ul>

Source: Krishnaveni and Meenakumari (2010, p284)

### Electronic Administration Opportunities for Nigerian Universities Administration

Electronic administration can help in transforming the Nigerian University Administration in the current and post COVID-19 pandemic. There is need for Nigerian Universities to continue functioning even in the present or future pandemic. Some of the opportunities include:

1. Online Teaching and Learning: This is an opportunity created by ICT where by knowledge can be facilitated and students learn while at different locations. This online teaching and learning is further categorized into virtual classroom and e-learning. The virtual class is the bringing together the teacher and all the students into an internet classroom for discussion on an important topic while e-learning permits for uploading and downloading of reading materials by the teacher and the students respectively. Some important applications that are used for online teaching and learning include Microsoft Teams, Zoom Cloud, and Google. Manir (2009) opined that the use of multimedia technologies and the internet in teaching and learning is seen as a

means to improve accessibility, efficiency and quality of learning by facilitating access to resources and services as well as remote exchange and collaboration.

2. E-meeting: This is another opportunity created by ICT. It is used where physical meeting is not possible. Hence, meeting is the coming together of persons to deliberate on a vital issue. E-meeting is the coming together of persons to deliberate on a vital issue not physically but on the internet while at different locations. This is made possible by the use of applications such as zoom cloud, Microsoft Teams etc.
3. e-circular: Circular are document containing important information from the management to subordinate/stakeholders. It is normally inform of internal and external memo, correspondence etc. It is distributed to a large number of persons. E-circular is the distribution of circular to a large number of persons through the internet. The distribution can be done using e-mail, fax, telegraph etc.

4. Virtual Conference: This is another opportunity created by computer and internet-related facilities. Virtual conference is an interactive session or academicians, researchers and scholars in order to present their research findings not physically but online while at different locations. This is made possible by the use of zoom cloud, Microsoft Teams etc.
5. e-notification: This is applicable where management wants to notify a very large group of individuals for instance, students' admission notification, employment/interview notification, meeting notification and events notification. ICT made it easier through e-mail, text message etc.
6. e-examination/Assessment: This is another opportunity provided by computer and internet-related facilities where by examinations, tests, thesis/dissertation defense, submitting of assignments and other forms of assessments are done online with the aid of ICT.
7. e-survey and questionnaire: Computer and internet-related facilities aid in research and development. It is possible whereby are designed and administered using electronic media and also feedback is received through same means. It helps researchers to reach large number of respondents across different locations of the world. This is facilitated with the help of platforms such as Facebook, WhatsApp, Twitter, email, website etc.
8. Database Management: ICT allows for organising, storing and retrieving data. Therefore, staff records, students' records, financial records and accounting are organized, stored and retrieved using ICT.
9. Spreadsheet: This is another opportunity provided by ICT where by data are presented and analyzed. The main concern of spreadsheet is data analysis. Using spreadsheet will provide for inserting, arranging, manipulating, analysing, presenting and interpretation of data. This is possible with the use of Microsoft excel and Statistical Package for Social Science (SPSS).
10. Word Processing: Computer offers immensurable cost relief services to administrators in the aspect of word processing. Word processing programmes enable administrators to compose, address, edit and produce typed copy in a wide variety of formats (Muhammad and Cheri, 2018).
11. e-staffing: This is personnel management using computer. The management can track attendance and absenteeism using Biometric Verification Machine (BVM). Advertisement, interview,

selection, placement, training and performance appraisal can be efficient and transparent when it is conducted using computer and internet-related facilities.

12. e-procurement: This is another opportunity created by ICT where by purchasing of goods and services are done online. Muhammad and Cheri (2018) observed that this will lead to reduction of transaction costs, operational efficiencies and a better foundation for decision making.

### **Challenges of Electronic Administration in Nigerian Universities**

Implementation of e-administration has commenced in Nigerian universities but it is bedeviled with many challenges which include the following:

1. Lack of infrastructure: Most of the Nigerian universities do not have enough computers that will support full implementation and utilisation of ICT potentials. In some universities access to internet services is very difficult. Even though some universities do provide free internet services via Wi-Fi, the services is limited to some areas, duration and restricted to specific websites. Some parts of Nigeria do not have access to internet services most especially those residing in remote areas. Therefore, staff and students residing in remote areas will find it difficult to access internet services.
2. Cost of Data: Data subscription in Nigeria is very expensive. Some students, due to economic and financial hardship, cannot be able to subscribe for data plan that will enable them to connect to an online class while at home. Some lectures take more than two hours and this will consume a lot of data.
3. Computer Illiteracy: Some lecturers and students do not have adequate knowledge on how to manipulate and utilise computer potentials. They lack training on computer application and operations.
4. Inadequate Finance: Computer and internet-related facilities are very expensive. Most of the Nigerian universities do not have enough funds to purchase these facilities. This is because most universities in Nigeria are underfunded. The little resources at their disposal cannot cater for all the need of the universities. The cost of computer and internet-related facilities, cost of training and cost of maintenance are great challenges to Nigerian universities.
5. Organisational Culture: e-administration is a new paradigm shift from traditional administration to

modern administration which is supported by ICT. Organization culture refers to the ways and manner in which jobs are performed over a long period of time in an organization. Therefore some officials are conservative- they want to continue with old methods, they do not want change.

6. **Security and Privacy:** Computer and internet-related facilities do not guarantee high security and privacy of data due to internet fraud and hacking activities bedeviling the ICT world. The hackers know how to break the security of a computer or website to alter, replace, insert, steal or delete data. Sometimes a computer may be stole or missed, the data in it may sometimes be lost forever.
7. **Maintenance:** Maintenance is another challenge of e-administration. The computer and internet-related facilities are very costly and difficult to maintain. The computer engineers, technicians and specialist that can repair some computers are scarce. Sometimes even the spear parts of some computers are difficult to get. In some instances a computer that failed need to be taken back to the company that manufacture it for maintenance and repair when needed. An order need to be sent to the company that manufacture a computer for it spear parts abroad. Furthermore, some individuals do not have maintenance culture. They tend to carelessly handle computers or leave them dirty which will make them prone to virus or failure.
8. **Epileptic Electricity Supply:** There is no stable electricity supply in most universities campuses. The ICT gadgets require electricity to function. For those lecturers and students residing in remote parts of Nigeria, they may be faced with lack of electricity to power their ICT gadgets.

## Conclusion

In this era of global pandemic leading to closures of most sectors of the economy including Nigerian universities, the COVID-19 has made it necessary to adjust the ways and manners in which jobs are performed in public institutions. Due to the need to take some precautionary measures such as reducing or avoiding crowd, the Nigerian universities are largely populated with lecturers, students, traders, and transporters which make it difficult to adhere to the COVID-19 protocols. Electronic administration potentials if fully harnessed and utilized can help in the continuation of operation of Nigerian universities even during lockdown and closures. All the functions and operations performed by these universities can go online with the aid of computer and internet-related facilities as ICT create abundant opportunities that Nigerian universities can harness and continue to

thrive even during pandemic. Though some challenges can hinder successful utilisation of the ICT but they can be overcome with the recommendations below.

## Recommendations

The following measures are recommended on the way forward on how to overcome the challenges bedeviling the application of ICT in the administration of Nigerian Universities.

1. Enough computer and internet related facilities should be provided by Nigerian universities.
2. The free internet services provided by Nigerian universities should be made available, accessible and everywhere in the campus 24/7.
3. Students data plan should be provided at subsidies rate.
4. Training and retraining on computer application and internet appreciation from time to time is necessary.
5. Adequate funds should be sourced through private sector, Non-governmental organizations and donor agencies for the procurement of infrastructure needed for e-administration.
6. Awareness and sensitisation campaign should be done through workshops, seminars or symposium to enlighten staff and students on the need to accept the new paradigm shift and instill maintenance culture in them on how to safely operate, handle, protect and take care of the computer and internet related facilities.
7. In collaboration with ICT experts, more sophisticated security software can be created to safeguard data and ensure privacy of the data. Backup of data using external storage devices or Google drive can help protect data from lost in case of loss or theft of computers.
8. For ICT gadgets to function, they require electricity. Therefore provision of stable electricity supply is necessary for e-administration to be effective. Nigerian universities can also look at newable energy options such solar power.

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